

W. Gage (Thos. H.)

A C A S E

OF

H Y D R O P H O B I A :

WITH REMARKS.

BY THOMAS H. GAGE, M. D.,

WORCESTER.

PUBLISHED BY THE WORCESTER DISTRICT MEDICAL SOCIETY.

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TYLER & SEAGRAVE, BOOK AND JOB PRINTERS,
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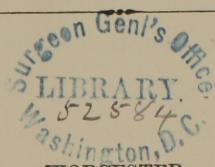
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The following paper was read before the Worcester District Medical Society at the stated meeting in January 1865. It is printed by the request and at the expense of the Society, for use of the members.

A CASE OF HYDROPHOBIA:

WITH REMARKS.

Mrs. H. B. W., aged 25, an intelligent, healthy, and very nervous lady, was confined Dec. 23, 1863, with her first child, which was still-born. She had subsequently much trouble with her breasts, on account of the large secretion of milk, and a little Scotch Terrier puppy was obtained to suckle them. This animal became a great pet, and Mrs. W.'s constant companion.

On Wednesday morning, May 18, 1864, this dog angrily snapped at his mistress, making upon the back of her right hand, with his teeth, a long red mark, which denuded the cutis vera, but drew no blood. He had appeared sick for several days, manifesting great irritability of temper, and a disposition to secrete himself under the barn, where he had been found eating swill, straw, dirt and the offal of the stable. In the afternoon of the same day, May 18, he was carried, on account of his strange behavior, to the stable of Dr. W. E. Richards, a veterinary surgeon, where he was immediately placed in close confinement and died the next night. An autopsy was made and the stomach found filled with the filthy mixture of substances

already mentioned. He had bitten, previously to his confinement, two other persons, besides Mrs. W., more or less severely, and a large dog, and was pronounced decidedly RABID by his keeper.

Beyond these statements concerning the condition of the dog both before and after the slight wound inflicted upon Mrs. W., I have been unable to discover anything throwing material light upon the subject. In regard to the opinion of Dr. Richards, I can only say that it is expressed with great confidence, and that he claims much familiarity with the symptoms of rabies in the dog.

Mrs. W. came to see me Saturday evening, May 21st, (four days after the wound,) because she felt anxious about it and wanted advice. There was then nothing remaining of the scratch but a little dry line which was nearly effaced. I found that she was very much agitated upon the subject, but I proposed no treatment, and only endeavored to dispel her fears, and to persuade her to dismiss it entirely from her thoughts. I have reason to know, however, that during the whole summer it very much occupied her mind, and was a ground of quite constant apprehension. I have learned, also, that she obtained some books, and read everything upon the subject of hydrophobia which she could find.

Early Tuesday morning, Nov. 8, Mrs. W. called at my office to consult me on account of a dull, heavy pain in the right arm and shoulder. She said it

commenced the Friday previous with pain in the fingers and back of the hand, and had gradually extended up the arm to the shoulder and side of the neck, and had become really quite severe. Otherwise she said she had felt quite well, though I observed that her tongue was considerably furred. It was very plain to me that she was nervous and anxious about this pain, and that her mind was upon the wound she had received from the dog, but neither of us mentioned it, and I spoke of the pain and advised for it as a probable neuralgia. A wild, unnatural expression of her eye, was so marked at this time as to be noticed and remarked upon by Dr. Sargent, who happened to be in my office when she entered, and to whom she was an entire stranger. I particularly observed that there was no appearance of recrudescence in the wound, and no swelling or evidence of soreness in the hand. After leaving my office she turned upon the steps and with hesitation and emotion said, "do you SUPPOSE I may be going to have hydrophobia?" Subsequently I met her upon the street during the forenoon and she seemed in excellent spirits, and made no allusion to the pain or to her fears.

After her return home she spent most of the day alone, and when her husband came home to tea he found her feeling somewhat ill, but making no special complaint except of the pain in the arm. He observed at the tea-table that she took a cup of tea

to drink, and immediately sat it down and left the table to go to the back door, and that when she came in again, instead of taking her seat at the table, she went and lay down upon the lounge. He asked what was the matter and she said, "only a little headache." About 9 o'clock she and her husband retired, and she then told him that the pain in the arm was very severe, and that she had difficulty in swallowing. This at once alarmed him and he got up and came for me, and finding that I was out of town called Dr. Clarke. Dr. C. was not informed by her or her husband of any special cause of alarm, and after careful examination concluded that derangement of the digestive organs was the cause of the pain and nervousness. He advised a pill of opium to be taken at once and followed next morning by Pil. Rhei Co.

I was called by Mr. W. about 7 o'clock the next morning, Nov. 9, but owing to some unavoidable delays it was nearly nine before I reached the house.

I found Mrs. W. in bed, looking pale and disturbed, and I could easily see that she was attempting to conceal fear and alarm. She said she had passed a pretty quiet night though she had slept but little, and that the pain had extended from the arm and neck across the upper part of her chest, and down upon the right side, and that the parts were sore. Her tongue was quite heavily furred, and her pulse about 100, occasionally intermitting.

Her mind was perfectly clear. I asked her what specially troubled her, and she said, "why Dr. I can't swallow," adding that she had tried to take the pills which Dr. C. left, and also to drink some tea and some water which had been brought, but, said she, "I cannot swallow, and the very idea chokes me."

I supposed she might be only nervous and hysterical, and replied hastily "we will see about that." I then prepared a pill containing about two grains of opium, and putting it into a tea-spoonful of currant jelly, handed it to her and asked her to swallow it. She started up in the bed, and leaning upon her elbow took the spoon, with the remark, "I will try." At last, after a great deal of hesitation and irresolution, with a sort of shuddering, she put it to her mouth, and with great effort attended with violent choking spasms, in which the muscles of the throat, mouth, face and eyes were simultaneously and powerfully convulsed, she finally succeeded, and then immediately asked for some water. When it was brought she took the goblet and held it a moment in her hand, and then suddenly pushed it from her with a shriek, and the exclamation, "Oh! I can't, take it away!" and then fell back upon her pillow shuddering and choking violently, the choking lasting for a minute or two.

I immediately ordered her room darkened, and kept perfectly quiet, and a large stimulating purga-

tive enema to be administered. This operated copiously before I left the house.

At 12 M., I returned and took Dr. Sargent with me. Her face had become flushed, her pulse quicker and fuller, her tongue dry, and she was perspiring freely. There was then sighing respiration, with frequent paroxysms of choking, spasmodic trouble in the throat which were very fatiguing; and any proposition to drink or swallow, or, apparently, the mere thought of it, produced an agitation, and expression of terror which was really very painful to witness. I believe Dr. Sargent did succeed, with much persuasion and delay, in getting her to swallow about half a tea-spoonful of tea, but desisted from any further attempt in obedience to her frantic appeals that we would not ask it again. She said "it seemed as though she should choke to death if she tried." Still, when undisturbed, she lay for most of the time very quiet, and in reply to questions said she felt no pain.

She was ordered a tea-spoonful of laudanum, to be administered in starch mucilage, by the rectum, at 2 P. M.

At 6 P. M., she was still flushed; her pulse 120; her skin hot and perspiring; and her mind clear. She had not slept, but had lain most of the afternoon with her eyes widely open, fixed and staring. She made no complaint of pain or of any other sensation except the "strange feelings" in her throat.

She had made no attempt to swallow. Once this afternoon, while lying perfectly quiet, she had started suddenly up with a look of terrible fright, and a scream, and seizing her attendant by the arms had shaken her violently. Then she had fallen back upon the pillow and with a smile said "I don't know what I did that for." She had begun to have great sensitiveness of the surface and to all external impressions. A gentle touch upon her body, or more especially upon her forehead or face with the hand, caused a shuddering and catching of the breath, very much like that a man gives when the cold shower bath first strikes him. When the lamp was first brought into the room, the light as it struck her produced a shuddering and choking spasm, which lasted for some minutes. She begged the bystanders not to touch her and not to move the bedclothes; said she could feel their breath even at a distance. When I took her arm to feel the pulse it caused a violent shudder.

She had shown through the day very little inclination to converse, and had made very few inquiries or remarks about her disease.

I ordered one and a half tea-spoonfuls of laudanum by enema.

At 12 P. M., Dr. Sargent called with me again. There had been no improvement in the symptoms, and no material change. There had been no sleep and no disposition to sleep. No severe pain or suf-

fering, beyond the frequent paroxysms of choking, and of sighing, gasping respiration. Her mind was perfectly clear and on the whole tranquil. No attempt had been made to swallow and I especially enjoined upon the nurse that none should be.

Ordered two tea-spoonfuls of laudanum by enema.

Thursday, Nov. 10, 8 1-2 A. M. The nurse reported that since my last visit the patient had been very quiet, except a short period of excitement at about 4 o'clock, when she suddenly started up as if in a violent fright; which, however, soon subsided, and she relapsed into her usual calmness. She reported no sleep, and no attempt to swallow any food or drink.

This morning Mrs. W. appeared decidedly more natural and much more inclined to converse. Her mind was still perfectly clear, and there was no evidence that I could discover of undue agitation. There was less acute sensitiveness to external impressions. The pulse, condition of the skin and tongue, and the respiration, remained as they had been the day before. She had called, herself, for a cup of cold water and a napkin, and wetting with her own hands a corner of the cloth in the water, had frequently wiped her face with it, and moistened her teeth, gums, and tongue, and had very much enjoyed it. Her eye was unusually brilliant and staring, but the pupils were quite natural. The only new symptom consisted in the annoyance caused

by a very small amount of viscid, tenacious, white saliva or mucus, which collected in the fauces and mouth, and which she made constant and fatiguing effort to expel by hawking and spitting. When, at last, a little of this was wiped from the teeth and lips, or spit upon a napkin, it looked like bits of moistened wool caught upon the cloth. The presence of this secretion in the throat, and the sensations to which it gave rise, caused frequent "choking spasms," like those spoken of the day before.

I made no attempt to administer anything by the mouth, but again repeated the laudanum injection; this time with beef tea.

At 1 P. M., no material change. Enema of laudanum repeated.

At 5 P. M., Dr. Sargent saw Mrs. W. for me, as I had an engagement out of town, and he succeeded in inducing her to attempt to swallow, and to take a small quantity of tea. This, however, was accomplished only by a great deal of persuasion, and very slowly, with constant recurrence of spasmodic paroxysms of choking, and of catching, gasping respiration.

At 10.30 P. M., I found that she had exhibited much greater evidence of fatigue and exhaustion than before, and that the annoyance caused by the viscid saliva, had kept up a continual and most wearing effort to expel it by constant hawking, spitting, wiping and retching, with all the concomitant chok-

ing and gasping. She lay upon her back, her eyes widely open and strangely staring, perspiring freely, but with warm skin, with pulse still full and distinct, and respiring only in deep sighs with long intervals between. There was now complaint that this respiration was more painful and tedious than at any previous time, and of distressing sensation of weight and pressure in the lower part of the chest and epigastrium. She told me, in a whisper, that she knew she was dying, and immediately summoned a number of her friends to bid them good bye, and to make disposition of her affairs with reference to that event; in all manifesting a perfectly clear intellect.

I thought this state of nervous excitement and exhaustion might be the result of intermitting the opium, none having been administered since 1 P. M., and I immediately ordered an injection of one teaspoonful of laudanum; but at the end of half an hour, seeing no effect from it, I injected subcutaneously into the forearm 1-3 gr. of Sulph. Morph. in half a drachm of water. The result of this was, that in half an hour her breathing became much freer and more natural, and the tiresome efforts to clear the mouth and throat much diminished. I left her at 2 A. M.

Friday, Nov. 11, 9 A. M. The nurse reported no sleep, but that Mrs. W. had been very quiet. At the earnest solicitations of her friends, she had attempted and succeeded in swallowing several tea-

spoonfuls of tea, and I found her very much pleased with the accomplishment. Except this there was very little change from the day before. I immediately urged the great importance of improving her present opportunity of taking nourishment, to which she assented, and said she would certainly make every effort, adding that, if she could take food, she did not see why she might not recover; and I, myself, felt quite sure, that whatever might be the true nature of her disease, a favorable change was about to occur. Of this I spoke to her in the most confident manner, determined, if possible, to remove from her mind every nervous anxiety; and in this succeeded to such an extent that she seemed entirely assured that patience and persevering effort would overcome her difficulties in swallowing, and that when these were overcome, sleep would return, and with sleep, relief from all her troubles. From this time she began to take beef tea, milk punch, and gruel in considerable quantities, commencing at first with a tea-spoonful at a time, which could only be repeated at long intervals, and after a great deal of preparation for each effort in clearing the mouth and throat, and in forming the resolution to attempt the act of swallowing; and it was evident that every such attempt really called for this struggle of the will, before it could be determined upon. After a time, however, she mustered resolution enough to take her drinks in larger quantities, until, before 1

P. M., she would drink off a tea-cupful or more at once.

Her manner of drinking was very peculiar. When a cup was brought her she would ask to be assisted up in the bed, and then, after a long preparation, like that just described, she would take it in both hands and in a spasmodic, tremulous manner, carry it suddenly to her lips, and drain off its contents almost at a single gulp, making no natural break in the act; then she would fall back upon the pillow exhausted, and choking violently for several minutes.

Still she had begun to take nourishment in good earnest and in sufficient amount; her strength had not become thus far dangerously impaired; her pulse was good; her mind clear; and her spirits, if they had been heretofore despondent, were now sufficiently hopeful; and when I left her at 1.30 P. M., it was with a sincere degree of confidence that she was better and that she might ultimately recover.

At 4.30 P. M., I was called in great haste, and upon my arrival, found Mrs. W. in a condition of complete collapse. Her face was pale and pinched; her whole body cold as marble, and drenched in clammy perspiration; and her pulse imperceptible. Her mind was clear and calm. She was even cheerful. She said that about an hour previously she began to feel cold, and to have a sensation of terrible stricture and pressure upon the chest and in the

epigastrium which still continued and seemed to "almost stop her breath."

Hot stimulants were immediately given in large quantities, large sinapisms were applied over the chest, and the whole body was wiped dry and wrapped in warm flannels, with the application of external heat by means of hot bottles and soapstones. But no reaction took place, and for several hours there was very little change. About 9 P. M., she began to be delirious and remained so until 12, though at no time violent. Soon after that hour she vomited a very large amount of green, viscid fluid, and shortly fell into a general convulsion, which lasted, perhaps, two or three minutes. From this she emerged unconscious, and remained so for half an hour, groaning heavily, when she again vomited, and again had a convulsion. Before this convulsion had passed away she was dead. Her death occurred upon the 178th day from the wound, and on the beginning of the fifth day from the first manifestation of the peculiar symptoms.

There is no doubt left upon my mind that this was a case of HYDROPHOBIA. It is true there were times in the progress of the disease when I felt doubtful of my diagnosis, and uncertain whether I might not be dealing with symptoms of a nervous and hysterical origin. I felt this doubt more especially in view of the partial remission of the

symptoms upon Thursday and Friday mornings; but the final result, with the phenomena by which it was ushered in, and a complete review of the whole case in the light of other recorded cases, leave me in no uncertainty.

I have made this report thus full, not only on account of the great interest of the case itself, but because it is the first case of the disease which has been reported to this Society, and the first, so far as I can learn, which has occurred in this immediate vicinity. If I shall seem to have been unnecessarily minute and particular, I have a two-fold apology to offer; first, that there are many, who, considering the rare occurrence of the disease, would be inclined to accept with hesitation the diagnosis, unless all the facts upon which it was founded were clearly and ingenuously stated;—and, second, that there have been among us medical men, and may still be some, who affect incredulity as to the existence of any such distinct disease as hydrophobia, resulting necessarily from the poison of a rabid animal.

This incredulity and skepticism form an interesting feature in the history of medical opinions concerning the disease, and are worthy of notice. One of the theories by which it has been attempted to explain the remarkable symptoms so characteristic of hydrophobia, has been, that they are only the manifestation of exalted and perverted nervous action, caused by a disordered state of the imagina-

tion, which, under the fearful anticipation of the peculiar horrors with which the disease is popularly invested, has been wrought up to the highest pitch of excitement and apprehension.

How utterly this theory fails to account for the phenomena in question appears from the following facts: 1st, that there are now upon the pages of medical literature a very large collection of reported cases, gathered from all quarters of this and other countries, the histories of which exhibit a degree of uniformity in rise, progress, symptoms, and termination, of most striking exactness, and a closeness of resemblance which could not be imputed to the influence of morbid imagination alone, however highly wrought upon, when occurring under such widely various circumstances of time, place, age, sex, temperament and intelligence. 2nd, that a very large proportion of such cases have occurred in young children who were utterly incapable of comprehending and appreciating the danger before them, or of acting in any intelligent degree under the influence of fear and apprehension, even if an attempt had been made to explain the subject to them. For example, it would be obviously impossible upon this theory to explain the phenomena presented in the very interesting case of hydrophobia, reported by Dr. Ingalls of Winchester, in the Boston Medical and Surgical Journal of Sept. 13, 1860, where the patient was only two years and eight months

old; or, again, those in the case reported in the same Journal, by Dr. J. Mason Warren, in the issue of July 14, 1859, where the patient's age was only three and a quarter years; or, yet again, in that of Dr. George Hayward, same Journal of Jan. 18, 1854, where the subject was a beautiful boy of only seven.

But another, and more sensible theory has been that hydrophobia is only a FORM of traumatic tetanus, and it is not to be denied that a certain degree of resemblance does exist between the two diseases; yet, however, with such radical differences as ought to make the diagnosis no very difficult matter with an enlightened and judicious observer.

The points of resemblance may be stated thus: a common origin in traumatic lesion; approximate uniformity of duration when either disease is fully established; in both great difficulty of swallowing, which, in tetanus occasionally, as in hydrophobia always, is greater with reference to liquids than solids; occasionally in tetanus, as in hydrophobia always, very acute sensitiveness to external impressions, so that frightful exacerbations of the spasms may come on from the most trivial exciting causes; and in both uniform and obstinate resistance to treatment, with almost uniform fatality. The differences are—that the period which elapses between the lesion and the accession of the disease, is always much shorter in tetanus than in hydrophobia, in the former

being seldom prolonged beyond two weeks, while the average is considerably less, and in the latter being seldom shorter than forty days, occasionally as long even as two years, while the average is from five weeks to three months;—that tetanus may follow any description of wound from any variety of causes, while hydrophobia only follows the bite of a rabid animal;—that tetanus is characterized by CONTINUOUS and RIGID spasms of voluntary muscles with scarcely any REMISSIONS, while the spasms of hydrophobia are INTERRUPTED and of short duration, with complete INTERMISSIONS and periods of entire muscular repose;—that in tetanus the jaw is fixed and immovable, from spasm of the muscles of mastication, while in hydrophobia it is never;—that in tetanus saliva may overflow the mouth from inability to swallow it, but in manner entirely unlike the distressing hawking and spitting of viscid, scanty, tenacious matter, so characteristic of hydrophobia;—that in tetanus there is rarely any intellectual disturbance, the patient usually retaining his sensibility to the last, unless it is suspended by the remedies employed, while in hydrophobia there is almost always some deviation from the normal condition of the mind, which in the progress of the disease often passes on to wild excitement and delirium;—that in tetanus the eye is suffused and fixed, and the features rigid and permanently distorted, while in hydrophobia the eye is unnaturally

brilliant, prominent, and staring, and the countenance wears an almost constant expression of terror and suspicion;—that in tetanus the patient articulates his words with indistinctness and difficulty, and is generally silent from choice, while in hydrophobia the articulation is clear, rapid, and often boisterous;—and, finally, that, however uncertain and unsettled may be the true pathology of either, it is sufficiently obvious that the symptoms of tetanus point to lesion, functional or organic, mainly of the spinal cord and spinal system of nerves, while those of hydrophobia indicate as clearly disturbance of the functions of the medulla oblongata at first, and at last super-added disturbance of the brain.

The truth is hydrophobia is a disease of unusually distinct and well marked features, and very little liable to be confounded with any other. Its sequence upon the bite of a rabid animal, or upon inoculation in some other form with its saliva; its stage of recrudescence, using this term not strictly to describe the occasional and exceptional reopening of the wound, but in a more general way to signify the train of symptoms which usually, for a few days, precede the characteristic phenomena; the final accession of these phenomena in the form of spasms of the muscles of deglutition, rendering the act of swallowing one of great difficulty if not utterly impossible, with consequent horror of attempting the act, and aversion to all sights or sounds

which suggest it; the spasmodic pain, stricture, and distress across the chest, and at the epigastrium, with interrupted sighing, gasping respiration; the viscid, tenacious, annoying secretion of saliva, with the wearing and painful process by which the sufferer endeavors to expel it; the acute and astonishing irritability of the surface, by which influences so slight as to be inappreciable to others become to the patient the source of agonizing paroxysms of distress; the exaltation and perversion of the mental faculties, which often rises to wild and uncontrollable fury; and at last in most cases collapse, general convulsion, coma, and death;—all these combine to constitute a disease as distinct and unmistakable as it is terrible and intractable.

But it is not my purpose to enter upon a full description of the disease, or offer any extended remarks upon its history, causes, nature, pathology, or treatment. All this has been so well and competently done by authors accessible to every one, that any attempt on my part would be superfluous, and at best but a poor repetition.

There is, however, a single point to which I would like to call your attention briefly, and that is, the impression which prevails in the public mind, and to some extent among physicians, that the hydrophobic patient is always delirious, violent, and dangerous. I have heard surprise expressed, by persons of both classes, at the mildness of the symptoms in this

respect, and the general tranquillity of mind of Mrs. W., with an implied doubt of the diagnosis on this account. It would require but a brief reading of the reported cases which are readily accessible, to correct this impression entirely. I have already alluded to the varying condition of the mind in the different subjects of the disease, and to the wide range of its morbid manifestations between the slightest departure from a normal state and one of wild and uncontrollable mania.

There have been not a few cases in which the patient has gone on to the fatal termination in full possession of his mental faculties. Dr. Rush, quoted by Dr. James Thacher, relates a case in which the patient "retained his reason and a playful humor till the last minute of his life." In another of Dr. Thacher's cases the patient "appeared to possess a considerable degree of reason through the whole scene; was perfectly able to distinguish and speak to every acquaintance around him, and was apparently sensible that his dissolution was fast approaching;—showed no disposition at any time to do the smallest injury or mischief to any person, but was constant in expressing the warmest and most benevolent wishes for the welfare of his family and neighbors;" Dr. Charles D. Homans, in a very fully reported case, says of his patient, only three or four hours before his death, "INTELLECT STILL REMARKABLY CLEAR," and makes no allusion to subsequent change

in this respect. Dr. Fogg of South Boston, reports a case and records the patient's death, "REASON CONTINUING TO THE LAST." Dr. George Hayward says of his little patient that he "showed a wonderful degree of resolution for a child of his age;" and again, "as long as he could make himself understood he seemed to be in possession of his reason." In a case reported by Dr. Herron of Ohio, "there were only occasional aberrations of intellect; so that with the utmost imaginable suffering, there was combined a consciousness almost perfect." In a case reported in the American Journal of Science, the patient is "represented as having been from this moment" (the first appearance of the symptoms,) "fully conscious of his danger; he was a pious man, and was supported by religion in his extremest suffering, and in the hour of dissolution." Dr. Peckham of Providence, reports a case in which, only 24 hours before death, "a magistrate was called in, and the patient made his will, exhibiting no excitement or delirium." Dr. Armington of Providence, relates one of which he says at the close, "HER MIND SEEMS TO HAVE REMAINED CLEAR TO THE END."

Such instances might be multiplied, but these are sufficient for my purpose. They show that a good degree of intellectual soundness is not incompatible with other unequivocal signs of the disease. Yet, such cases are to be looked upon as

exceptional. They constitute but a small fractional part of those which are reported, and bear only a small proportion to those in which mental aberration and violence are present. Most generally, however, delirium and violence do not manifest themselves in any marked degree during the first day or two of the disease, but sooner or later do appear, and often constitute the most appalling feature of this terrible malady.

Note.

For the convenience of any who may be induced by a perusal of this paper, or led, as I have been, by a practical necessity, to inquire further concerning hydrophobia, I append directions to a few of the more generally accessible sources of information.

In the Boston Medical and Surgical Journal are numerous reported cases. Of those which seem best authenticated the following is a correct list:—Vol. 14, page 341, by Dr. Otho M. Herron of Ohio; Vol. 39, page 532, by Dr. Abner H. Brown of Lowell; Vol. 49, page 493, by Dr. George Hayward of Boston; Vol. 50, page 115, by Dr. Charles D. Homans of Boston; Vol. 50, page 246, by Dr. J. S. H. Fogg of South Boston; Vol. 50, page 509, by Dr. Thomas W. Blatchford of Troy, N. Y.; Vol. 54, page 452, by Dr. F. H. Peckham of Providence; Vol. 54, page 455, by Dr. Armington of Providence; Vol. 57, page 209, by Dr. J. P. Maynard of Dedham; Vol. 59, page 399, by Dr. S. D. Townsend of Boston; Vol. 60, page 409, by Dr. J. Mason Warren of Boston; Vol. 65, page 129, by Dr. William Ingalls of Winchester. In many of the old medical libraries may be found *Thacher on Hydrophobia*, a volume of about 500 pages; a quite elaborate treatise upon the disease, and containing reports of quite a large number of cases, some of which are very valuable. In the published Transactions of the American Medical Association for 1856, is a "Report upon Hydrophobia," by a committee consisting of Drs. Blatchford and Spoor, to which is appended a table of 106 cases, giving the patient's name, the authority

upon which the case is reported, the date of the bite, the date of sickening, and the date of death. As a supplement to this report, and immediately following it, are given detailed reports of a large number of the cases collected in the table, most of which had never been published elsewhere. Some of these are very valuable contributions to our knowledge of the disease. The article upon hydrophobia in the *Cyclopedia of Practical Medicine*, by Dr. J. L. Bardsley, is a full and systematic treatise, including an interesting sketch of its history, and is evidently regarded by writers since its publication, as authority upon the subject.

It would, of course, be superfluous to refer to the works upon Surgery and Theory and Practice now in general use among Students.

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